




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

DATA MATRIX

Date February 1, 2021		EPA Reg No./File Symbol 69969-X		Page 1 of 6	
Applicant's/Registrant's Name & Address Arkion Life Sciences LLC 551 Mew Drive Suite J, New Castle DE 19720		Product: Anthraquinone Technical			
Ingredient 9,10-Anthraquinone					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
Product Identity and Composition					
830.1550/880.1100	Product identity and composition	44496101 (TGAI) 46789501 (TGAI)	Arkion Life Sciences	OWN	
830.1600/880.1200	Description of materials used to produce the product	44496101 (TGAI) 46789501 (TGAI)	Arkion Life Sciences	OWN	
830.1620/880.1200	Description of the production process	44496101 (TGAI) 46789501 (TGAI)	Arkion Life Sciences	OWN	
830.1670/880.1200	Discussion of formation of impurities	44496101 (TGAI) 46789501 (TGAI)	Arkion Life Sciences	OWN	
Analysis and Certified Limits					
830.1700	Preliminary Analysis	46789502 (TGAI) 51230901 (TGAI)	Arkion Life Sciences	OWN	
830.1750	Certified limits	46789501 (TGAI) 51230910 (TGAI)	Arkion Life Sciences	OWN	
830.1800	Enforcement analytical method	44496103 (TGAI)	Arkion Life Sciences	OWN	
Physical and Chemical Characteristics					
830.6302	Color	44496103 (TGAI)	Arkion Life Sciences	OWN	
Signature 			Name and Title: Timothy Joseph, Regulatory Agent		Date 2/1/2021



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Applicant's/Registrant's Name & Address
Arkion Life Sciences LLC
551 Mew Drive Suite J, New Castle DE 19720

Product:
Anthraquinone Technical

Ingredient
9,10-Anthraquinone

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.6303	Physical state	44496103 (TGAI)	Arkion Life Sciences	OWN	
830.6304	Odor	44496103 (TGAI)	Arkion Life Sciences	OWN	
830.6313	Stability to normal and elevated temperatures, metals, and metal ions	44496103 (TGAI)	Arkion Life Sciences	OWN	
830.6314	Oxidizing or reducing action	51230902 (TGAI)	Arkion Life Sciences	OWN	
830.6315	Flammability	44496103 (TGAI)	Arkion Life Sciences	OWN	
830.6316	Explosibility	51230903 (TGAI)	Arkion Life Sciences	OWN	
830.6317	Storage stability	44496103 (TGAI)	Arkion Life Sciences	OWN	
830.6319	Miscibility	51230904 (TGAI)	Arkion Life Sciences	OWN	
830.6320	Corrosion characteristics	44496103 (TGAI)	Arkion Life Sciences	OWN	
830.6321	Dielectric breakdown voltages	51230905 (TGAI)	Arkion Life Sciences	OWN	
830.7000	pH	44496103 (TGAI)	Arkion Life Sciences	OWN	
830.7050	UV/visible light absorption	51230906 (TGAI)	Arkion Life Sciences	OWN	
830.7100	Viscosity	51230907 (TGAI)	Arkion Life Sciences	OWN	

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Ingredient 9,10-Anthraquinone					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.7200	Melting Point	44496103 (TGAI)	Arkion Life Sciences	OWN	
830.7220	Boiling Point	N/51230908 (TGAI)	N/A	N/A	
830.7300	Density, bulk density or specific gravity	44496103 (TGAI)	Arkion Life Sciences	OWN	
830.7370	Dissociation Constant	44496103 (TGAI)	Arkion Life Sciences	OWN	
830.7520	Particle Size	51230909 (TGAI)	Arkion Life Sciences	OWN	
830.7550	Octanol/Water Coefficient	44496103 (TGAI)	Arkion Life Sciences	OWN	
830.7840 830.7860	Solubility	44496103 (TGAI) 44496106 (TGAI)	Arkion Life Sciences	OWN	
830.7950	Vapor Pressure	44496103 (TGAI)	Arkion Life Sciences	OWN	
Biochemical Residue Data Requirements					
860.1100	Chemical Identity	44496101 (TGAI) 46789501 (TGAI)	Arkion Life Sciences	OWN	
Biochemical Pesticides Human Health Assessment					
Acute Testing					
870.1100	Acute oral toxicity	44496108 (TGAI)	Arkion Life Sciences	OWN	
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Ingredient 9,10-Anthraquinone					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.1200	Acute dermal toxicity	44496110 (TGAI)	Arkion Life Sciences	OWN	
870.1300	Acute inhalation toxicity	44496112 (TGAI)	Arkion Life Sciences	OWN	
870.2400	Primary eye irritation	50965013 (TGAI)	Arkion Life Sciences	OWN	
870.2500	Primary dermal irritation	50965014 (TGAI)	Arkion Life Sciences	OWN	
870.2600	Dermal sensitization	50965015 (TGAI)	Arkion Life Sciences	OWN	
Subchronic Testing					
870.3100	90-Day oral	48708301(TGAI)	Arkion Life Sciences	OWN	
870.3200	28-Day dermal	48639801(TGAI)	Arkion Life Sciences	OWN	
Developmental Toxicity					
870.3700	Prenatal development-rat	48639803 (TGAI) 48639802 (TGAI)	Arkion Life Sciences	OWN	
870.3700	Prenatal development-rabbit	50131501 (TGAI) 50131502 (TGAI)	Arkion Life Sciences	OWN	

Signature

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Ingredient 9,10-Anthraquinone					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
Mutagenicity					
870.5100 (152-17)	Bacterial reverse mutation	44496117 (TGAI) 50345102 (AQ-OX) 50345103 (AQ-OX Pure) 50345104 (AQ-FC) 50345105 (AQ-DA) 50345106 (2-OH-AQ)	Arkion Life Sciences	OWN	
152-17	Mutagenicity Test	44496118 (TGAI) 44496119 (TGAI) 44496120 (TGAI)	Arkion Life Sciences	OWN	
Special Tests					
870.7800/880.3550	28-Day immunotoxicity	48639804 (TGAI)	Arkion Life Sciences	OWN	
870.4200	Carcinogenicity-2 species rat and mouse	48370301 (TGAI) 48370302 (TGAI) 48370303 (TGAI) 48370304 (TGAI) 50345101 (TGAI)	Arkion Life Sciences	OWN	
Biochemical Pesticides Nontarget Organisms and Environmental Fate					
Avian Testing					
850.2100 (71-2)	Avian Acute Oral	44496121 (TGAI)	Arkion Life Sciences	OWN	
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Ingredient 9,10-Anthraquinone					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
Aquatic Organism Testing					
850.1075 (72-1)	Fish acute toxicity Bluegill	44496122 (TGAI)	Arkion Life Sciences	OWN	
850.1075 (72-1)	Fish acute toxicity Rainbow trout	44496123 (TGAI)	Arkion Life Sciences	OWN	
850.1010 (72-2)	Aquatic invertebrate acute toxicity, freshwater (Daphnia)	44496124 (TGAI)	Arkion Life Sciences	OWN	
TGAI – Studies conducted on the Technical Grade Active Ingredient AQ-OX – Anthraquinone produced by oxidation of coal-derived anthracene AQ-FC – Anthraquinone produced by Friedel-Crafts reaction AQ-DA – Anthraquinone produced by Diels Alder reaction 2-OH-AQ – Anthraquinone metabolite					

Signature

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2/1/2021